SEQUENCE LISTING

<110> EVANS, Donald L. et al.

<120> Novel Teleost Derived Antimicrobial Polypeptides

<130> G25-085US Nat

<140> US 10/588,417
<141> 2005-02-18

<150> PCT/US05/05398
<151> 2005-02-18

<150> US 60/545,370
<151> 2004-02-18

<150> US 60/623,909
<151> 2004-11-01

<160> 32

<170> PatentIn version 3.4

<210> 1
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<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 1

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly
1 5 10 15

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly
20 25 30

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<213> Artificial Sequence

<220>
<223> Synthetic Peptide

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Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly
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<210> 3

<211> 203
<212> PRT
<213> Ictalurus punctatus

<400> 3

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Met Ser Ala Gln Ala Glu Glu Thr Ala Pro Glu Ala Ala Ala Pro Val
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Gln Pro Ser Gln Pro Ala Ala Lys Lys Lys Gly Pro Ala Ser Lys Ala
            20                  25                  30

Lys Pro Ala Ser Ala Glu Lys Lys Asn Lys Lys Lys Lys Gly Lys Gly
        35                  40                  45

Pro Gly Lys Tyr Ser Gln Leu Val Ile Asn Ala Ile Gln Thr Leu Gly
    50                  55                  60

Glu Arg Asn Gly Ser Ser Leu Phe Lys Ile Tyr Asn Glu Ala Lys Lys
65                  70                  75                  80

Val Asn Trp Phe Asp Gln Gln His Gly Arg Val Tyr Leu Arg Tyr Ser
                85                  90                  95

Ile Arg Ala Leu Leu Gln Asn Asp Thr Leu Val Gln Val Lys Gly Leu
            100                 105                 110

Gly Ala Asn Gly Ser Phe Lys Leu Asn Lys Lys Lys Phe Ile Pro Arg
        115                 120                 125

Thr Lys Lys Ser Ser Val Lys Pro Arg Lys Thr Ala Lys Pro Thr Lys
    130                 135                 140

Lys Pro Ala Lys Lys Ala Ala Lys Lys Lys Lys Arg Val Ser Gly Val
145                 150                 155                 160

Lys Lys Ala Thr Pro Pro Pro Glu Lys Thr Ser Lys Pro Lys Lys Ala
                165                 170                 175

Asp Lys Ser Pro Ala Val Ser Ala Lys Lys Ala Ser Lys Pro Lys Lys
            180                 185                 190

Ala Lys Gln Thr Lys Lys Thr Ala Lys Lys Thr
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<210> 4
<211> 956
<212> DNA
<213> Ictalurus punctatus

<400> 4
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ctcaggctga ggaaactgca ccagaagcag cagcaccagt acaaccatca caaccagcgg 120

ccaaaaagaa gggacccgcc agtaaagcaa agcctgcctc tgcagaaaaa aagaacaaaa 180

agaagaaagg gaaagggccc ggaaagtaca gccagctggt gatcaatgct atccaaacgc 240

tgggagagag aaacggctcg tctcttttta agatctacaa cgaggcgaag aaagtgaact 300

ggtttgacca gcagcacggg cgcgtgtacc tccgctactc catccgcgcg ctgctgcaga 360

acgacacgct cgtgcaggtg aagggtctgg gcgccaacgg ctccttcaag ctcaacaaaa 420

agaagttcat ccccagaacc aagaagagct ctgtaaagcc gagaaagact gcgaaaccga 480

ccaaaaagcc agccaaaaaa gcagcgaaga agaagaaaag ggtcagcggc gtgaagaagg 540

cgactccccc cccagagaaa acctccaaac ccaagaaagc ggataaaagt ccagccgtct 600

ctgccaagaa ggcgagcaag cccaagaaag ctaaacagac aaaaaagact gctaagaaga 660

cttaaaacgt ttatattctg catgctttgt gcattaagca ttgcactgcg ggtaaactgc 720

acgctttctg atcgcagttc attaagtagg atatgcacag tgtttaacca agtgtgcaag 780

tcactctggt ctcaatgttt tactgatgta accacatgta aataactgta caaagaagga 840

aacaatcact tttgtaacgt ctgctttgtt attatttctt ttctactagt tagctaaaat 900

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Ser Ala Gln Ala Glu Glu Thr Ala Pro Glu Ala Ala Ala Pro Val Gln
            5                  10                  15

cca tca caa cca gcg gcc aaa aag aag gga ccc gcc agt aaa gca aag      152
Pro Ser Gln Pro Ala Ala Lys Lys Lys Gly Pro Ala Ser Lys Ala Lys
        20                  25                  30

cct gcc tct gca gaa aaa aag aac aaa aag aag aaa ggg aaa ggg ccc      200
Pro Ala Ser Ala Glu Lys Lys Asn Lys Lys Lys Lys Gly Lys Gly Pro
    35                  40                  45

gga aag tac agc cag ctg gtg atc aat gct atc caa acg ctg gga gag      248
Gly Lys Tyr Ser Gln Leu Val Ile Asn Ala Ile Gln Thr Leu Gly Glu
50                  55                  60                  65

aga aac ggc tcg tct ctt ttt aag atc tac aac gag gcg aag aaa gtg      296
Arg Asn Gly Ser Ser Leu Phe Lys Ile Tyr Asn Glu Ala Lys Lys Val
                70                  75                  80

aac tgg ttt gac cag cag cac ggg cgc gtg tac ctc cgc tac tcc atc      344
Asn Trp Phe Asp Gln Gln His Gly Arg Val Tyr Leu Arg Tyr Ser Ile
            85                  90                  95

cgc gcg ctg ctg cag aac gac acg ctc gtg cag gtg aag ggt ctg ggc      392
Arg Ala Leu Leu Gln Asn Asp Thr Leu Val Gln Val Lys Gly Leu Gly
        100                 105                 110

gcc aac ggc tcc ttc aag ctc aac aaa aag aag ttc atc ccc aga acc      440
Ala Asn Gly Ser Phe Lys Leu Asn Lys Lys Lys Phe Ile Pro Arg Thr
    115                 120                 125

aag aag agc tct gta aag ccg aga aag act gcg aaa ccg acc aaa aag      488
Lys Lys Ser Ser Val Lys Pro Arg Lys Thr Ala Lys Pro Thr Lys Lys
130                 135                 140                 145

cca gcc aaa aaa gca gcg aag aag aag aaa agg gtc agc ggc gtg aag      536
Pro Ala Lys Lys Ala Ala Lys Lys Lys Lys Arg Val Ser Gly Val Lys
                150                 155                 160

aag gcg act ccc ccc cca gag aaa acc tcc aaa ccc aag aaa gcg gat      584
Lys Ala Thr Pro Pro Pro Glu Lys Thr Ser Lys Pro Lys Lys Ala Asp
            165                 170                 175

aaa agt cca gcc gtc tct gcc aag aag gcg agc aag ccc aag aaa gct      632
Lys Ser Pro Ala Val Ser Ala Lys Lys Ala Ser Lys Pro Lys Lys Ala
        180                 185                 190

aaa cag aca aaa aag act gct aag aag act taaaacgttt atattctgca       682
Lys Gln Thr Lys Lys Thr Ala Lys Lys Thr
    195                 200

tgctttgtgc attaagcatt gcactgcggg taaactgcac gctttctgat cgcagttcat   742

taagtaggat atgcacagtg tttaaccaag tgtgcaagtc actctggtct caatgtttta   802

ctgatgtaac cacatgtaaa taactgtaca aagaaggaaa caatcacttt tgtaacgtct   862
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aataaaatga taaaagaaaa aaaaaaaaaa aaaa 956

<210> 6
<211> 203
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<213> Ictalurus punctatus

<400> 6

Met Ser Ala Gln Ala Glu Glu Thr Ala Pro Glu Ala Ala Ala Pro Val
1 5 10 15

Gln Pro Ser Gln Pro Ala Ala Lys Lys Lys Gly Pro Ala Ser Lys Ala
20 25 30

Lys Pro Ala Ser Ala Glu Lys Lys Asn Lys Lys Lys Lys Gly Lys Gly
35 40 45

Pro Gly Lys Tyr Ser Gln Leu Val Ile Asn Ala Ile Gln Thr Leu Gly
50 55 60

Glu Arg Asn Gly Ser Ser Leu Phe Lys Ile Tyr Asn Glu Ala Lys Lys
65 70 75 80

Val Asn Trp Phe Asp Gln Gln His Gly Arg Val Tyr Leu Arg Tyr Ser
85 90 95

Ile Arg Ala Leu Leu Gln Asn Asp Thr Leu Val Gln Val Lys Gly Leu
100 105 110

Gly Ala Asn Gly Ser Phe Lys Leu Asn Lys Lys Lys Phe Ile Pro Arg
115 120 125

Thr Lys Lys Ser Ser Val Lys Pro Arg Lys Thr Ala Lys Pro Thr Lys
130 135 140

Lys Pro Ala Lys Lys Ala Ala Lys Lys Lys Lys Arg Val Ser Gly Val
145 150 155 160

Lys Lys Ala Thr Pro Pro Pro Glu Lys Thr Ser Lys Pro Lys Lys Ala
165 170 175

Asp Lys Ser Pro Ala Val Ser Ala Lys Lys Ala Ser Lys Pro Lys Lys

180 185 190

Ala Lys Gln Thr Lys Lys Thr Ala Lys Lys Thr
195 200

<210> 7
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<213> Artificial Sequence

<220>
<223> Synthetic Peptide

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Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly
1 5 10 15

Gly Gly Gly Gly
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<210> 8
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 8

Thr Cys Gly Thr Cys Gly Thr Thr Gly Thr Cys Gly Thr Thr Gly Thr
1 5 10 15

Cys Gly Thr Thr
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<210> 9
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 9

Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys
1 5 10 15

Cys Cys Cys Cys
20

<210> 10
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 10

Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala
1 5 10 15

Ala Ala Ala Ala
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<210> 11
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 11

Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr
1 5 10 15

Thr Thr Thr Thr
20

<210> 12
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<212> PRT
<213> Artificial Sequence

<220>
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<400> 12

Thr Gly Cys Thr Gly Cys Thr Thr Gly Thr Gly Cys Thr Thr Gly Thr
1 5 10 15

Gly Cys Thr Thr
20

<210> 13
<211> 192
<212> PRT
<213> Danio rerio

<400> 13

Met Pro Ala Val Val Glu Glu Ser Ala Pro Ala Pro Ala Pro Ala Pro
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Ala Glu Lys Lys Ala Lys Pro Ala Val Ala Ala Ser Pro Ala Lys Lys
20 25 30

Lys Lys Lys Lys Ser Lys Gly Pro Gly Lys Tyr Ser Lys Leu Val Thr
35 40 45

Asp Ala Ile Arg Thr Leu Gly Glu Lys Asn Gly Ser Ser Leu Phe Lys
50 55 60

Ile Tyr Asn Glu Ala Lys Lys Val Ser Trp Phe Asp Gln Lys Asn Gly
65 70 75 80

Arg Met Tyr Leu Arg Ala Ser Ile Arg Ala Leu Val Leu Asn Asp Thr
85 90 95

Leu Val Gln Val Lys Gly Phe Gly Ala Asn Gly Ser Phe Lys Leu Asn
100 105 110

Lys Lys Lys Leu Glu Lys Lys Pro Lys Lys Ala Ala Ser Lys Lys Ala
115 120 125

Thr Lys Lys Thr Glu Lys Pro Thr Ser Lys Lys Ala Val Thr Lys Lys
130 135 140

Val Ser Ala Lys Lys Ser Ala Lys Lys Ser Pro Val Lys Lys Lys Thr
145 150 155 160

Pro Lys Lys Thr Ser Val Lys Lys Ala Thr Ala Lys Pro Lys Lys Thr
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Ala Ser Lys Lys Pro Lys Ala Ala Ala Lys Lys Lys Thr Lys Ser Lys
180 185 190

<210> 14

<211> 217
<212> PRT
<213> Xenopus laevis

<400> 14

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Met Ala Leu Glu Leu Glu Glu Asn Leu His Ser Thr Glu Glu Glu Asp
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Glu Glu Glu Glu Glu Glu Glu Gly Asp Glu Met Arg Ser Arg Ser Thr
            20                  25                  30

Arg Asn Lys Gly Gly Ala Ala Ser Ser Ser Gly Asn Lys Lys Lys Lys
        35                  40                  45

Lys Lys Lys Asn Gln Pro Gly Arg Tyr Ser Gln Leu Val Val Asp Thr
    50                  55                  60

Ile Arg Lys Leu Gly Glu Arg Asn Gly Ser Ser Leu Ala Lys Ile Tyr
65                  70                  75                  80

Ser Glu Ala Lys Lys Val Ser Trp Phe Asp Gln Gln Asn Gly Arg Thr
                85                  90                  95

Tyr Leu Lys Tyr Ser Ile Lys Ala Leu Val Gln Asn Asp Thr Leu Leu
            100                 105                 110

Gln Val Lys Gly Val Gly Ala Asn Gly Ser Phe Arg Leu Asn Lys Lys
        115                 120                 125

Lys Leu Glu Gly Leu Pro Tyr Asp Lys Lys Pro Pro Pro Ala Lys Pro
    130                 135                 140

Ser Ser Ser Ser Ser Ser Asn Lys Lys Gln Gln Gln Gly Pro Ser Ser
145                 150                 155                 160

Ser Pro Ser Lys Ser His Lys Lys Ala Lys Pro Lys Ala Lys Ala Glu
                165                 170                 175

Lys Glu Lys Pro Lys Thr Ser Ser Ala Lys Ala Lys Ser Pro Lys Lys
            180                 185                 190

Ser Ala Ala Lys Gly Lys Lys Met Lys Lys Gly Ala Lys Pro Ser Val
        195                 200                 205
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Arg Lys Ala Pro Lys Ser Lys Lys Ala
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<210> 15
<211> 188
<212> PRT
<213> Mus musculus

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Thr Ala Arg Lys Thr Ala Lys Ala Gly Gly Ser Ala Ala Pro Thr Gln
20 25 30

Pro Lys Arg Arg Lys Asn Arg Lys Lys Asn Gln Pro Gly Lys Tyr Ser
35 40 45

Gln Leu Val Val Glu Thr Ile Arg Lys Leu Gly Glu Arg Gly Gly Ser
50 55 60

Ser Leu Ala Arg Ile Tyr Ala Glu Ala Arg Lys Val Ala Trp Phe Asp
65 70 75 80

Gln Gln Asn Gly Arg Thr Tyr Leu Lys Tyr Ser Ile Arg Ala Leu Val
85 90 95

Gln Asn Asp Thr Leu Leu Gln Val Lys Gly Thr Gly Ala Asn Gly Ser
100 105 110

Phe Lys Leu Asn Arg Lys Lys Leu Glu Gly Gly Ala Glu Arg Arg Gly
115 120 125

Ala Ser Ala Ala Ser Ser Pro Ala Pro Lys Ala Arg Thr Ala Ala Ala
130 135 140

Asp Arg Thr Pro Ala Arg Pro Gln Pro Glu Arg Arg Ala His Lys Ser
145 150 155 160

Lys Lys Ala Ala Ala Ala Ala Ser Ala Lys Lys Val Lys Lys Ala Ala
165 170 175

Lys Pro Ser Val Pro Lys Val Pro Lys Gly Arg Lys

180 185

<210> 16
<211> 213
<212> PRT
<213> Homo sapiens

<400> 16

Met Ser Val Glu Leu Glu Glu Ala Leu Pro Val Thr Thr Ala Glu Gly
1 5 10 15

Met Ala Lys Lys Val Thr Lys Ala Gly Gly Ser Ala Ala Leu Ser Pro
20 25 30

Ser Lys Lys Arg Lys Asn Ser Lys Lys Lys Asn Gln Pro Gly Lys Tyr
35 40 45

Ser Gln Leu Val Val Glu Thr Ile Arg Arg Leu Gly Glu Arg Asn Gly
50 55 60

Ser Ser Leu Ala Lys Ile Tyr Thr Glu Ala Lys Lys Val Pro Trp Phe
65 70 75 80

Asp Gln Gln Asn Gly Arg Thr Tyr Leu Lys Tyr Ser Ile Lys Ala Leu
85 90 95

Val Gln Asn Asp Thr Leu Leu Gln Val Lys Gly Thr Gly Ala Asn Gly
100 105 110

Ser Phe Lys Leu Asn Arg Lys Lys Leu Glu Gly Gly Gly Glu Arg Arg
115 120 125

Gly Ala Pro Ala Ala Ala Thr Ala Pro Ala Pro Thr Ala His Lys Ala
130 135 140

Lys Lys Ala Ala Pro Gly Ala Ala Gly Ser Arg Arg Ala Asp Lys Lys
145 150 155 160

Pro Ala Arg Gly Gln Lys Pro Glu Gln Arg Ser His Lys Lys Gly Ala
165 170 175

Gly Ala Lys Lys Asp Lys Gly Gly Lys Ala Lys Lys Thr Ala Ala Ala
180 185 190

Gly Gly Lys Lys Val Lys Lys Ala Ala Lys Pro Ser Val Pro Lys Val
195 200 205

Pro Lys Gly Arg Lys
210

<210> 17
<211> 15
<212> PRT
<213> Mus musculus

<400> 17

Ser Glu Thr Ala Pro Ala Glu Lys Pro Ala Pro Ala Lys Ala Glu
1 5 10 15

<210> 18
<211> 25
<212> PRT
<213> Homo sapiens

<400> 18

Lys Leu Asn Lys Lys Ala Ala Ser Gly Glu Ala Lys Pro Lys Ala Lys
1 5 10 15

Ala Lys Ser Pro Lys Lys Ala Lys Ala
20 25

<210> 19
<211> 17
<212> PRT
<213> Oncorhynchus mykiss

<400> 19

Lys Ala Val Ala Ala Lys Lys Ser Pro Lys Lys Ala Lys Lys Pro Ala
1 5 10 15

Thr

<210> 20
<211> 19
<212> PRT
<213> Ictalurus punctatus

<400> 20

Lys Gly Arg Gly Lys Gln Gly Gly Lys Val Arg Ala Lys Ala Lys Thr
1 5 10 15

Arg Ser Ser

<210> 21
<211> 20
<212> PRT
<213> Oncorhynchus mykiss

<220>
<221> misc_feature
<222> (19)..(19)
<223> Xaa can be any naturally occurring amino acid

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1 5 10 15

Thr Lys Xaa Ala
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<210> 22
<211> 17
<212> PRT
<213> Centropristis striata

<400> 22

Pro Glu Pro Ala Lys Ser Ala Pro Lys Lys Gly Ser Lys Lys Ala Val
1 5 10 15

Thr

<210> 23
<211> 22
<212> PRT
<213> Cynoscion regalis

<400> 23

Pro Asp Pro Ala Pro Lys Thr Ala Pro Lys Lys Gly Ser Lys Lys Ala
1 5 10 15

Val Thr Lys Thr Ala Gly
20

<210> 24
<211> 26
<212> PRT
<213> Oncorhynchus mykiss

<400> 24

Ala Glu Val Ala Pro Ala Pro Ala Ala Ala Ala Pro Ala Lys Ala Pro
1 5 10 15

Lys Lys Lys Ala Ala Ala Lys Pro Lys Lys
20 25

<210> 25
<211> 4
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<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 25

Ala Lys Lys Ala
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<210> 26
<211> 11
<212> PRT
<213> Ictalurus punctatus

<400> 26

Gly Ala Ser Gly Ser Phe Lys Leu Asn Lys Lys
1 5 10

<210> 27
<211> 21
<212> PRT
<213> Lacobacillus plantarum

<400> 27

Ala Tyr Ser Leu Gln Met Gly Ala Thr Ala Ile Lys Gln Val Lys Lys
1 5 10 15

Leu Phe Lys Lys Trp
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<210> 28
<211> 28
<212> PRT
<213> Hyalophora cecropia

<400> 28

Pro Lys Trp Lys Leu Phe Lys Lys Ile Glu Lys Val Gly Gln Asn Ile
1 5 10 15

Arg Asp Gly Ile Ile Lys Ala Gly Pro Ala Val Ala
20 25

<210> 29
<211> 22
<212> PRT
<213> Acanthoscurria gomesiana

<400> 29

Phe Lys Phe Leu Ala Lys Lys Val Ala Lys Thr Val Ala Lys Gln Ala
1 5 10 15

Ala Lys Gln Gly Ala Lys
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<210> 30
<211> 22
<212> PRT
<213> Bufo gargarizans

<400> 30

Ala Gly Arg Gly Lys Gln Gly Gly Lys Val Arg Ala Lys Ala Lys Thr
1 5 10 15

Arg Ser Ser Arg Ala Gly
20

<210> 31
<211> 23
<212> PRT
<213> Xenopus laevis

<400> 31

Gly Ile Gly Lys Phe Leu His Ser Ala Lys Lys Phe Gly Lys Ala Phe
1 5 10 15

Val Gly Glu Ile Met Asn Ser

<210> 32
<211> 30
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<222> (23)..(23)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (26)..(26)
<223> Xaa can be any naturally occurring amino acid

<400> 32

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Pro Ala Pro Lys Lys Gly Xaa Lys Lys Xaa Val Thr Lys Ala
20 25 30